



COMMISSIONER OF PATENTS AND TRADEMAR

Washington, D.C. 20231

FORM PTO-1449 (Modified) LIST OF PATENTS AND PUBLICATIONS FOR APPLICANT'S INFORMATION DISCLOSURE STATEMENT (Use several sheets if necessary) Sheet <u>1</u> of <u>10</u>

In the Application of O'Connor et al.

Serial No.: 09/922,218

Art Unit: Unassigned

Filed: August 3, 2001

Examiner: Unassigned

Title: HYDROGEL PARTICLE FORMULATION

#### **U.S. PATENT DOCUMENTS**

Exam. Init.	Ref. Desig.	Document No.	Date	Name	Class	Sub Class	Filing Date
PB	AA-1	4,853,226	August 1, 1989	Michada et al.			
	AB-1	4,925,677	May 15, 1990	Feijen			
	AC-1	4,978,069	December 18, 1990	Anderson et al.		$\supset$	:
	AD-1	4,994,276	February 19, 1991	Baichwal et al.		Λ	
	AE-1	5,041,292	August 20, 1991	Feijen		$\setminus$	
	AF-1	5,053,332	October 1, 1991	Cook et al.			
CB	AG-1	5,700,459	December 23, 1997	Krone et al.			

#### FOREIGN PATENT DOCUMENTS

Exam. Init.	Ref. Desig.	Document No.	Publication Date	Country or Patent Office	Class	Sub Class	Trans YES	lation NO
RB	AH-1	WO 94/09819	May 11, 1994	РСТ				·
	Al-1	WO 98/13798	May 26, 1995	РСТ				
	AJ-1	WO 96/12513	May 2, 1996	РСТ				
PB	AK-1	WO 96/20022	July 4, 1996	РСТ	_			

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es	AL-1	WO 97/48485	December 24, 1997	PĊT		
[	AM-1	WO 98/10750	March 19, 1998	PCT		
	AN-1	WO 00/15263	March 23, 2000	PCT		
	AO-1	0 357 401	March 7, 1990	EPO		
pp	AP-1	2 245 831	January 15, 1992	GB		

#### OTHER DOCUMENTS (including Author, Title, Date, Pertinent Pages, etc.)

Exar	n. lnit.	Ref. Desig.	Description
P	B	AQ-1	Aasted, Bent, "Highly purified Agarose as Stacking Gel in Sodium Dodecyl Sulphate/Polyacrylamide-Gel Electrophoresis," <i>Biochem. J.</i> <u>189</u> :183-184 (1980)
		AR-1	Albright et al., "Diet, Apoptosis, and Carcinogenesis," <i>Adv. Exper. Med. And Biol.</i> 422:92-107 (1997)
		AS-1	Cadic-Amadeuf et al., "Inflammatory Reaction Induced by Agarose Implants Reduced by Adding Adrenal Cells to the Polymer," <i>ASAIO Journal</i> 38(3);M386-M389 (1992)
		AT-1	Anderson and Hagel, "Some Properties and Applications of Superose 6B," <i>Analytical Biochemistry</i> 141:461-465 (1984)
A	)	AU-1	Andrasko, Jan, "Water in Agarose Gels Studied by Nuclear Magnetic Resonance Relaxation in the Rotating Frame," <i>Biophys. Journal</i> <u>15</u> (12):1235-1243 (1975)

Examiner:	Kachel	Bennett	Date Considered: 4-23-85



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Exam. Init.	Ref. Desig.	Description
Pb	AV-1	Arndt, E.R. and Stevens, E. S., "Anhydro Sugar and Linkage Contributions to Circular Dichroism of Agarose and Carrageenan, With Conformational Implications," 303:73-78 (1997)
	AW-1	Arnott et al., "The Agarose Double Helix and Its Function in Agarose Gel Structure," <i>J. Mol. Biol.</i> <u>90</u> :269-284 (1975)
	AX-1	Arshady, Reza, "Microspheres for Biomedical Applications: Preparation of Reactive and Labelled Microspheres," <i>Biomaterials</i> <u>14</u> (1):5-15 (1993)
	AY-1	Artursson et al., "Biodegradable Microspheres, 1. Duration of Action of Dextranase Entrapped in Polyacrylstarch Microparticles in Vivo, " The Journal of Pharmacology and Experimental Therapeutics 231(3):705-712 (1986)
	AZ-1	Ауцик et al., "Method of Obtaining Agarose from Agar-Agur," <i>Lab Delo</i> <u>6</u> :370-371 (1976)
	BA-1	Bourrillos, et al., "An Improved Method for Preparing Agarose," <i>Biochim. Biophys. Acta</i> 111:334-336 (1965)
	BB-1	Brogren, Carl-Henrik, "Brownian Motion and Electrophorectic Transport in Agarose Gels Studied by Epifluorescence Microscopy and Single Particle Tracking Analysis," <i>J. Phys. Chem. B.</i> 101:5659-5663 (1997)
	BC-1	Bulone et al., "Mesoscopic Gels at Low Agarose Concentration: Perturbation Effects of Ethanol," <i>Biophysical Journal</i> 72:388-394 (1997)
W	BD-1	Muro-Cacho, Carlos A., "In Situ PCR: Overview of Procedures and Applications," Frontiers in Bioscience 2:15-19 (1997)

Examiner: Radiel bennett Date Considered: 4-23-



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## FORM PTO-1449 (Modified) LIST OF PATENTS AND PUBLICATIONS FOR APPLICANT'S INFORMATION DISCLOSURE STATEMENT (Use several sheets if necessary) Sheet 4 of 10

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Title: HYDROGEL PARTICLE FORMULATION

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Exam. Init.	- Ref. Desig.	Description
Ph	BE-1	Chan et al., "An Inexpensive Solid Medium for Obtaining Colony-Forming Units of Oral Spirochetes," <i>Oral Microbiology Immunology</i> <u>12</u> :372-376 (1997)
	BF-1	Coppi et al., "Polysaccharide Film-Coating Process for Freely Swellable Hydrogels," Pharmaceutical Development and Technology 3(3):347-353 (1998)
	BG-1	Cowan, D. E., "Thermophilic Proteins: stability and Function in Aqueous and Organic Solvents," <i>Comp. Biochem. Physiol.</i> <u>118A</u> (3):429-438 (1997)
	BH-1	Davies et al., "Improved Manufacture and Application of an Agarose Magnetizable Solid-Phase Support," <i>Appl. Biochem. Biotechnol.</i> <u>68</u> (1-2):95-112 (1997)
	BI-1	Davis, S.S. and Illum, L., "Polymeric Microspheres as Drug Carriers," <i>Biomaterials</i> 9(1):111-115 (1988)
	BJ-1	Draye et al., "In vitro Characteristics of bioactive Molecules from Dextran Dialdehyde Cross-Linked Gelatin Hydrogel Films," Biomaterials 19:99-107 (1998)
	BK-1	Eppstein et al., "Alternative Delivery Systems for Peptides and Proteins As Drugs,"  CRC Critical Reviews in Therapeutic Drug Carrier System 5(2):99-139 (1998)
	BL-1	Gehrke et al., "Enhanced Loading and Activity Retention of Bioactive Proteins in Hydrogel Delivery Systems," <i>Journal of Controlled Release</i> 55:21-33 (1998)
	BM-1	Gombotz, W. and Pettit, DK., "Biodegradable Polymers for Protein and Peptide Drug Delivery," <i>Bioconjugate Chem.</i> <u>6</u> (4):332-351 (1995)
Ub	BN-1	Gribnau et al., "Microscopic Observations on Commercial Sepharose Deviations From Normal Bead-Structure," <i>FEBS Letters</i> <u>57</u> (3):301-303 (1975)

Examiner:	Rachel	Dennett	Date Considered:	4-77-83
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# FORM PTO-1449 (Modified) LIST OF PATENTS AND PUBLICATIONS FOR APPLICANT'S INFORMATION DISCLOSURE STATEMENT (Use several sheets if necessary) Sheet 5 of 10

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Title: HYDROGEL PARTICLE FORMULATION

	2 . 2 .	
Exam. Init.	Ref. Desig.	Description
El 2	BO-1	Gustavsson et al., "Superporous Agarose Beads as a Hydrophobic Interaction Chromatography Support," <i>Journal of Chromatography A</i> 830:275-284 (1999)
	BP-1	Gustavsson et al., Continuous Superporous Agarose Beds for Chromatography and Electrophoresis," <i>Journal of Chromatography A</i> 832:29-39 (1999)
	BQ-1	Häglund et al., "Dissolution Controlled Drug Release From Agarose Beads," <i>Drug Development and Industrial Phamacy</i> 20(6):947-959 (1994)
	BR-1	Hjertén, S. and Liao, J., "High-Performance Liquid Chromatography of Proteins on Compressed, Non-Porous Agarose Beads," <i>Journal of Chromatography</i> 457:165-174 (1988)
	BS-1	Holloway et al., "Agarose-Encapsulated Adsorbents," <i>The International Journal of Artificial Organs</i> 2(1):81-86 (1979)
	BT-1	Howe, F.A., "Relaxation times in Paramagnetically Doped Agarose Gels as a Function of Tempature and Ion Concentration," <i>Magnetic Resonance Imaging</i> <u>6</u> :263-270 (1988)
	BU-1	Ito et al., "Quantitative Prediction of <i>in Vitro</i> Drug Clearance and Drug Interactions from <i>in Vitro</i> data on Metabolism, Together with Binding and Transport," <i>Annu. Rev. Pharmacol. Toxicol.</i> 38:461-499 (1998)
	BV-1	Frank-Kamenetskii, M., " A Simple Solution to the Stability of the Double Helix?," <i>Nature</i> 324:p.305 (1986)
NB	BW-1	Kanke et al., "Clearance of <sup>141</sup> Ce-Labeled Microspheres from Blood and Distribution in Specific Organs Following Intravenous and Intraarterial Administration in Beagle Dogs," <i>Journal of Pharmaceutical Sciences</i> 69(7):755-762 (1980)

Examiner:	Rachel	Bennett	Date Considered:	4-23-03
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Title: HYDROGEL PARTICLE FORMULATION

Exam. Init.	-Ref. Desig.	Description	
W	BX-1	Kim et al., "Hydrogels: Swelling, Drug Loading, and Release," <i>Pharmaceutical Research</i> 9(3):283-290 (1992)	
	BY-1	Kikuchi et al., "Effect of Ca <sup>2+</sup> -Alginate Gel Dissolution on Release of Dextran with Different Molecular Weights," <i>Journal of Controlled Release</i> <u>58</u> :21-28 (1999)	
	BZ-1	Jani, G.K., and Gohel, M.C., "Effects of Selected formulation Parameters on the Entraptment of Diclofenac Sodium in Ethyl Cellulose Microspheres," <i>Journal of Controlled Release</i> 43:245-250 (1997)	
	CA-1	Kuijpers et al., "Controlled Delivery of Antibacterial Proteins From Biodegradable Matrices," <i>Journal of Controlled Release</i> 53:235-247 (1998)	
	CB-1	Li et al., "High-Performance Liquid Chromatography of Proteins on Deformed NonPorous Agarose Beads. Affinity Chromatography of Dehydrogenases Based on Cibacron Blue-Derivatized Agarose," <i>Preparative Biochemistry</i> 20(2):107-121 (1990)	
	CC-1	Lösgen et al., "Large Agarose Beads for Extracorporeal Detoxification System," <i>Biomat. Med. Dev. Art. Org.</i> <u>6</u> (2):151-173 (1978)	
	CD-1	Lundberg, P. and Kuchel, P.W., "Diffusion of Solutes in Agarose and Alginate Gels: <sup>1</sup> H and <sup>23</sup> Na PFGSE and <sup>23</sup> Na TQF NMR Studies," <i>Mag. Res. Med.</i> <u>37</u> (1):44-52 (1997)	
	CE-1	Maaloum et al., "Agarose Gel Structure Using Atomic Force Microscopy: Gel concentration and Ionic Strength Effects," <i>Electrophoresis</i> <u>19</u> :1606-1610 (1998)	
(Ub)	CF-1	Margel, S., "Agarose-Polyaldehyde Microsphere Beads: Synthesis and Biomedical Applications," <i>Applied Biochemistry and Biotechnology</i> 8:523-539 (1983)	

Examiner:	Kachel	Bennott	Date Considered:	4-23-03
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Exam. Init.	Ref. Desig.	Description		
CG-1		Margel, S., and Offarim, M., "Novel Effective Immunoadsorbents Based on Agarose-Polyaidehyde Microsphere Beads: Synthesis and Affinity Chromatography," <i>Analytical Biochemistry</i> 128:342-350 (1983)		
	CH-1	McNeil, M.E. and Graham N. G., "Properties Controlling the Difusion and Release of Wat Soluble Solutes from Poly(Ethylene Oxide) Hydrogels: 3.Device Geometry," <i>J. Biomat Sci. Polymer Edn.</i> 7(11):937-951 (1996)		
	CI-1	Mitsuiki et al., j"Determination of Molecular Weight of Agars and Effect of the Molecular Weight on the Glass Transition," <i>J. Agric. Food Chem.</i> 47:473-478 (1999)		
	CJ-1	Moussaoui et al., "Diffusion of Proteins in Sepharose C1-B Gels," <i>Journal of Chromatography</i> 591:115-120 (1992)		
	CK-1	Nunjeri et al., "Hydrogel Beads Based on Amidated Pectins for Colon-Specific Drug Delivery: The Role of Chitosan in Modifying Drug Release," <i>Journal of Controlled Release</i> 46:273-278 (1997)		
:	CL-1	Munjeri et al., "An Investigation into the Suitability of Amidated Pectin Hydrogel Beads as a Delivery Matrix for Chloroquine," <i>Journal of Pharmaceutical Sciences</i> 87(8):905-908 (1998)		
	CM-1	Nakano et al., "Agarose-Encapsulated Adsorbent Beads for Direct Hemoperfusion: Preparation and <i>in Vitro</i> Evaluation," <i>Chem. Parm. Buil.</i> 342:2591- 2598 (1986)		
PB	CN-1	Okada et al., "Medical Application of Microencapsulating Hybridoma Cells in Agarose Microbeads "Cytomedicine": Therapeutic Effect on igG1 Plasmacytosis and Mesangio-Proliferative Glomerulonephritis in the Interleukin 6 Transgenic Mouse," <i>Journal of Controlled Release</i> 44:195-200 (1997)		

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Exam. Init.	Ref. Desig.	Description				
(P) CO-1		Okada, H. and Toguchi, H., "Biodegradable Microspheres in Drug Delivery," <i>Critical Reviews in Therapeutic Drug Carrier Systems</i> <u>12</u> (1):1-99 (1995)				
	CP-1	Patil, R. and Speaker, T.J., "Water-Based Microsphere Delivery System for Proteins," Journal of Pharmaceutical Sciences 89(1):9-15 (2000)				
	CQ-1	Patil et al., "Macroporous Poly(Sucrose Acrylate) Hydrogel for Controlled Release of Macromolecules," <i>Biomaterials</i> <u>17</u> (24):2343-2350 (1996)				
	CR-1	Pernodet et al., "Pore Size of Agarose Gels by Atomic Force Microscopy," Electrophoresis 18:55-58 (1997)				
	CS-1	Polson et al., "Preparation of Agarose with Low Net Negative Charge Density Using an Expensive Anion Exchanger," <i>Preparative Biochemistry</i> <u>16</u> (4):309-319 (1986)				
	CT-1	Polson et al., "Agarose: A Possible Universal Gel Exclusion Agent," <i>Preparative Biochemistry</i> 14(2):173-179 (1984)				
	CU-1	Ramzi et al., "Structure-Properties Relation for Agarose Thermoeversible Gels in Binary Solvents," <i>Macromolecules</i> 31:6106-6111 (1998)				
	CV-1	Rees, D. A., "Structure Confirmation and Mechanism in the Formation of Polysaccharide Gels and Networks," <i>Advances in Carbohydr. Chem Biochem.</i> 24:3+7-332 (1969)				
	CW-1	Schroeder et al., "Distribution of radiolabeled Subvision Microspheres After Intravenous Administration to Beagle Dogs," <i>J. Pharm. Sci.</i> <u>67</u> (4):504-509 (1978)				
Pab	CX-1	Schroeder et al., "Physiological Effect of Subvision Microspheres Administered to Beagle Dogs," <i>J. Pharm. Sci.</i> <u>67</u> (4):508-513 (1978)				

EXAMINER: Initial if citation considered whether or not the citation conforms with MPEP609. Draw a line through the

citation if not in conformance and not considered. Include copy of this form with next communication to applicant.



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Exam. Init	Ref- Desig.	Description
ph	CY-1	Sideman et al., "Tailor-Made Agarose-Based Reactive Beads for Hemoperfusion and Plasma Perfusion," <i>Applied Biochemistry Biotechnology</i> 10:167-182 (1984)
	CZ-1	Sjöbert et al., "How Interactions Between Drugs and Agaros-Carrageenan Hydrogels Influence the Simultaneous Transport of Drugs," <i>Journal of Controlled Release</i> <u>59</u> :391-400 (1999)
	DA-1	Stellwagen, J. and Stellwagen, N.C., "The Effect of Gel Structure on Matrix Orientation," <i>Electrophoresis</i> 13:595-600 (1992)
	DB-1	Stellwagen, J. and Stellwagen, N.C., "The Effect of Gel Structure on Matrix Orientation," <i>Electrophoresis</i> 13:595-600 (1992)
	DC-1	Stenekes, R.J.H. and Hennik, W.E., "Equilibrium Water Content of Microspheres Based on Cross-Linked Dextran," <i>International Journal of Pharmaceutics</i> 189:131-135 (1999)
	DD-1	Tanaka, Toyoichi, <i>Gels</i> 124-138
	DE-1	Thano et al., "Biodegradable Indium-111 Labeled Microspheres for <i>in Vivo</i> Evaluation of Distribution and Elimination," <i>Pharmaceutical Research</i> 12(12):2060-2064 (1995)
	DF-1	Vanbever et al., "Formulation and Physical Characterization of Large Porous Particles for Inhalation," 16(11):1735-1741 (1999)
	DG-1	Waki, S. and Harvey, J.D., "Study of Agarose Gels by Electro Microscopy of Freeze-Fractured Surfaces," Biopolymers <u>21</u> :1909-1926 (1982)
W	DH-1	Walker et al., "Preparation of Agarose Gels as Reference Substances for NMR Relaxation Time Measurement," <i>Magnetic Resonance Imaging</i> 6:215-222 (1988)

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DM	DI-1	Walker et al., "Preparation of Agarose Gels as Reference Substances for NMR Relaxation Time Measurement," <i>Magnetic Resonance Imaging</i> 6:215-222 (1988)
all	DJ-1	White, K.N., <i>Tanpakushitsu Kakusan Koso</i> <u>221</u> (13):1431-1436 (1977)

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